

Serial No. 09/741,411

A. Partyka 20

Claim Amendments

No claim is amended in this Amendment.

- 1           1. (previously presented) A method of authentication in a telemetry system, said method  
2 comprising:
- 3           transmitting, by each of a plurality of transmitters, transmissions intermittently at time intervals  
4 and at a plurality of frequencies independently of any receiver of said transmissions and independently of  
5 any other of said plurality of transmitters, and
- 6           holding, by a receiver, simultaneously for each of said plurality of transmitters, data indicative of  
7 an expected frequency and an expected time of at least one future transmission, and
- 8           authenticating transmissions based on an expected and actual transmission frequency and time.
- 1           2. (previously presented) The method of claim 1 wherein said expected transmission frequency  
2 comprises estimate for transmitter reference frequency drift.
- 3           3. (previously presented) The method of claim 1 wherein said expected transmission time  
4 comprises estimate for transmitter time reference drift.
- 1           4. (previously presented) The method of claim 1 wherein each of said plurality of transmitters  
2 controls transmission frequency and time between transmissions based on frequency-time pattern that is  
3 different for each of said plurality of transmitters.
- 1           5. (previously presented) The method of claim 1 wherein, each of said plurality of transmitters is  
2 for varying encryption key between transmissions.
- 1           6. (previously presented) The method of claim 5 wherein said encryption key is varied based on  
2 frequency-time pattern for controlling transmission frequency and time between transmissions.
- 1           7. (previously presented) The method of claim 1 wherein each of said plurality of transmitters is  
2 for verifiable and variable modification of transmitted messages content based on frequency-time pattern  
3 for controlling transmission frequency and time between transmissions.
- 1           8. (previously presented) A receiver for authenticating telemetry transmissions, said receiver  
2 comprising:
- 3           logic for holding, simultaneously for each plurality of transmissions, data indicative of an  
4 expected time and an expected frequency of at least one future transmission, wherein each said plurality

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5 of transmissions is transmitted by a different one of a plurality of transmitters, wherein each of said  
6 plurality of transmitters is for transmitting transmissions intermittently at time intervals and at a plurality  
7 of frequencies independently of any equipment that is capable of receiving any of said transmissions from  
8 any of said plurality of transmitters, and

9 circuitry for receiving said transmissions;

10 wherein said receiver is for authenticating transmissions based on an expected and actual  
11 transmission frequency and time.

1 9. (previously presented) The receiver of claim 8 wherein said expected transmission frequency  
2 comprises estimate for transmitter reference frequency drift.

1 10. (previously presented) The receiver of claim 8 wherein said expected transmission time  
2 comprises estimate for transmitter time reference drift.

1 11. (previously presented) The receiver of claim 8 wherein frequency and time of transmissions is  
2 controlled according to a frequency-time pattern that is different for each of said plurality of transmitters.

1 12. (previously presented) The receiver of claim 8 wherein said receiver is for changing  
2 decryption key between transmissions based on a frequency-time pattern for controlling frequency and  
3 time of transmissions.

1 13. (previously presented) The receiver of claim 8 wherein said receiver, in operation,  
2 authenticates transmissions based on verifiable and variable modification of transmission content.

1 14. (previously presented) The receiver of claim 13 wherein said verifiable modification is based  
2 on frequency-time pattern for controlling transmission frequency and time.

1 15. (previously presented) A frequency hopping telemetry transmitter comprising:

2 circuit for transmitting transmissions intermittently, at time intervals and at various frequencies,  
3 independently of any receiver of said transmissions, and

4 logic for providing a predetermined frequency-time pattern for controlling transmission frequency  
5 and time between transmissions, and

6 wherein said transmitter is for varying encryption, for said transmissions, based, at least in part,  
7 on said frequency-time pattern.

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1           16. (previously presented) The transmitter of claim 15 wherein said frequency-time pattern is  
2 individually selected for said transmitter from a plurality of predetermined patterns.

1           17. (previously presented) The transmitter of claim 15 wherein said frequency-time pattern is  
2 predetermined based on a transmitter identification.

1           18. (previously presented) A frequency hopping telemetry transmitter comprising:  
2 circuit for transmitting transmissions intermittently, at time intervals and at various frequencies,  
3 independently of any receiver of said transmissions, and  
4 logic for providing a predetermined frequency-time pattern for controlling transmission frequency  
5 and time between transmissions, and

6 wherein said transmitter is for modification of at least a portion of known data for transmission  
7 using a modifier that is varied based, at least in part, on said frequency-time pattern.

1           19. (previously presented) The transmitter of claim 18 wherein frequency-time pattern is  
2 individually selected for said transmitter from a plurality of predetermined patterns.

1           20. (previously presented) The transmitter of claim 18 wherein said frequency-time pattern is  
2 predetermined based on a transmitter identification.